

### REMARKS

This Amendment, submitted in response to the Office Action dated November 10, 2008, is believed to be fully responsive to each point of rejection raised therein. Accordingly, favorable reconsideration on the merits is respectfully requested.

Claims 1-16, 18 and 19 are all the claims pending in the application.

#### **I. Rejection of claims 1, 3, 7, 9, 14 and 18 Under 35 U.S.C. § 103**

The Examiner rejected claims 1, 3, 7, 9, 14 and 18 under 35 U.S.C. § 103(a) as being unpatentable over Aweva et al. (US 6,894,974 B1) in view of Hann (US 7,088,722 B1).

#### **Claim 1**

Claim 1 recites:

A communication system, comprising:

a **transmitter** for transmitting **one or more data packets**;

at least one **receiver** connected to the transmitter, for **receiving the data packets and transmitting to the transmitter one or more response signals** in response to the received data packets; and

a **multiplexer** for multiplexing and transmitting to the transmitter **the response signals** transmitted from the receiver, and **transmitting the transmitted data packets from the transmitter to a corresponding receiver**, the multiplexer composed of:

a queue status monitor; and

a congestion control adjuster,

wherein the **queue status monitor monitors a queue status of at least one of the transmitted data packets and the response signals**, and

wherein **the congestion control adjuster instructs the receiver to hold or compress the response signals based on the monitored queue status**.

The Examiner cites Aweva for teaching the claimed transmitter, receiver, and multiplexer. Specifically, the Examiner cites multiplexer 50 of Aweva for teaching the claimed multiplexer.

The Examiner concedes that Aweva does not teach the claimed queue status monitor and congestion control adjuster and cites Hann to cure the deficiencies. Specifically, the Examiner asserts that Hann discloses a method of controlling the flow of multiplexed data in the digital subscriber line access multiplexer, which the Examiner asserts discloses the claimed multiplexer composed of a queue status monitor. Further, the Examiner asserts that the flow control unit 148 receives a flow control signal and gives directions and therefore teaches the claimed congestion control adjuster.

However, contrary to the Examiners assertions, Hann does not teach the claimed queue status monitor. Specifically, the Examiner has not cited any component of Hann for teaching the claimed queue status monitor. Further, step 204 merely discloses that FIFO's within the DSLAM 30 are continuously monitored for the status of a data storage capacity. For example, the FIFO's may monitor themselves to determine whether more data may be received without risking FIFO overflow. Therefore, there is no teaching or suggestion of a queue status monitor since the FIFO's monitor themselves.

Further, there is no teaching or suggestion that a queue status of at least one of transmitted data packets and the response signals is monitored. Hann teaches monitoring the status of a data storage capacity so as to prevent overflow. See col. 7, lines 20-30 and col. 8, lines 20-30. Hann does not teach monitoring the status of transmitted data packets or response

signals. The monitoring cited by the Examiner discloses monitoring a FIFO for a status of a data storage capacity.

Also, the flow control unit 148 does not teach the claimed congestion control adjuster. The congestion control adjuster instructs the receiver to hold or compress the response signals based on the monitored queue status. There is no teaching or suggestion that the flow control unit 148 instructs a receiver to hold or compress a response signal. The flow control unit 148 may direct a logic unit to halt the transmission of data from an ATM switch 110 of the DSLAM 30. However, halting the transmission of data does not teach instructing a receiver to hold or compress a response signal.

Moreover, the combination of Hann with Aweva is not obvious. Aweva discloses a multiplexer 50. On detection of an acknowledgement packet, the packet is forwarded to an acknowledgement signal queue 46 from which an acknowledgement signal transmitter 48 receives packet signals and transmits them through a multiplexer 50 to the first data transmitter 12. Aweva merely discloses that packet signals are transmitted through a multiplexer. There is no teaching or suggestion that the multiplexer of Aweva should be modified to include a queue status monitor or a congestion control adjuster, evidencing that the Examiner's reasoning is merely a result of impermissible hindsight.

For at least the above reasons, claim 1 and its dependent claims should be deemed allowable. To the extent claim 7 recites similar subject matter, claim 7 and its dependent claims should be deemed allowable for at least the same reasons.

**Claim 3**

Claim 3 recites “wherein the **congestion control adjuster instructs the corresponding receiver to hold the response signals if the queue status of the monitored data packets is over a first threshold.**”

The Examiner asserts that the flow control unit 148 directs the logic unit 112 to halt the transmission of data. However, logic unit 112 does not teach the claimed receiver. Further, although the transmission of data is halted, there is no teaching or suggestion that a receiver is instructed to hold response signals.

Therefore, claim 3 should further be deemed allowable. To the extent claims 9, 14 and 18 recite similar subject matter, they should be deemed allowable for at least the same reasons.

**II. Rejection of claims 6 and 12 Under 35 U.S.C. § 103**

Claims 6 and 12 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over Aweva and Hann and further in view of Norell et al. (US 6,853,637). Claims 6 and 12 should be deemed allowable by virtue of their dependency to claims 1 and 7 for at least the reasons set forth above. Moreover, Norell does not cure the deficiencies of Aweva and Hann.

**III. Rejection of claim 19 Under 35 U.S.C. § 103**

Claim 19 has been rejected under 35 U.S.C. § 103(a) as being unpatentable over Aweva and Hann and further in view of Schweinhart et al. (US 6,961,539).

To the extent claim 19 recites subject matter similar to claim 1, it should be deemed allowable for at least the same reasons. Further, Schweinhart does not cure the deficiencies of Aweva and Hann.

The Examiner states that Aweva and Hann do not teach “wherein the congestion control adjuster instructs the receiver to compress the response signals based on the monitored queue status” and cites Schweinhart, col. 2, lines 44-54, to cure the deficiency.

The portion of Schweinhart cited by the Examiner discloses providing a capability within a satellite terminal to direct TCP traffic to a priority queue for expedited transmission. Upon receipt of TCP packets, a satellite terminal classifies the packets and selectively applies compression, storing the compressed data into a queue with a high priority level. Therefore, Schweinhart discloses compressing packets and storing the compressed data. However, there is no teaching or suggestion that a congestion control adjuster (flow control unit 148 of Hann as cited by the Examiner) instructs the receiver to compress the response signals based on the monitored queue status.

For at least the above reasons, claim 19 should further be deemed allowable.

**IV. Rejection of claims 2, 4-5, 8, 10-11, 13 and 15-16 Under 35 U.S.C. § 103**

Claims 2, 4-5, 8, 10-11, 13 and 15-16 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over Aweva and Hann in view of Guttman et al. (US 7,031,259). Claims 2, 4-5, 8, 10-11, 13 and 15-16 should be deemed allowable by virtue of their dependency to claims 1 and 7 for at least the reasons set forth above.

To the extent claim 13 recites subject matter similar to claim 1, claim 13 and its dependent claims should be deemed allowable for at least the same reasons. Further, Guttman does not cure the deficiencies of Aweva and Hann.

**V. New Claim**

Applicant has added claim 20 to provide a more varied scope of protection. Claim 20 should be deemed allowable by virtue of its dependency to claim 1 for at least the reasons set forth above. Moreover, the art cited by the Examiner does not teach the elements of claim 20.

**VI. Conclusion**

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,

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